

“(ii) a description of the means by which such authorities attempt to inappropriately block or remove such expression;

“(B) an assessment of the extent to which government authorities in the country have persecuted or otherwise punished, arbitrarily and without due process, an individual or group for the nonviolent expression of political, religious, or ideological opinion or belief through the Internet, including electronic mail;

“(C) an assessment of the extent to which government authorities in the country have sought, inappropriately and with malicious intent, to collect, request, obtain, or disclose without due process personally identifiable information of a person in connection with that person's nonviolent expression of political, religious, or ideological opinion or belief, including expression that would be protected by the International Covenant on Civil and Political Rights, adopted at New York December 16, 1966, and entered into force March 23, 1976, as interpreted by the United States; and

“(D) an assessment of the extent to which wire communications and electronic communications are monitored without due process and in contravention to United States policy with respect to the principles of privacy, human rights, democracy, and rule of law.

“(2) CONSULTATION.—In compiling data and making assessments under paragraph (1), United States diplomatic personnel should consult with relevant entities, including human rights organizations, the private sector, the governments of like-minded countries, technology and Internet companies, and other appropriate nongovernmental organizations or entities.

“(3) DEFINITIONS.—In this subsection—

“(A) the term ‘electronic communication’ has the meaning given such term in section 2510 of title 18, United States Code;

“(B) the term ‘Internet’ has the meaning given such term in section 231(e)(3) of the Communications Act of 1934 (47 U.S.C. 231(e)(3));

“(C) the term ‘personally identifiable information’ means data in a form that identifies a particular person; and

“(D) the term ‘wire communication’ has the meaning given such term in section 2510 of title 18, United States Code.”; and

(2) in section 502B (22 U.S.C. 2304)—

(A) by redesignating the second subsection (i) (relating to child marriage) as subsection (j); and

(B) by adding at the end the following:

“(k) FREEDOM OF EXPRESSION ASSESSMENT.—

“(1) IN GENERAL.—The report required under subsection (b) shall include an assessment of freedom of expression with respect to electronic information in each foreign country, which shall include—

“(A)(i) an assessment of the extent to which government authorities in the country inappropriately attempt to filter, censor, or otherwise block or remove nonviolent expression of political or religious opinion or belief through the Internet, including electronic mail; and

“(ii) a description of the means by which such authorities attempt to inappropriately block or remove such expression;

“(B) an assessment of the extent to which government authorities in the country have persecuted or otherwise punished, arbitrarily and without due process, an individual or group for the nonviolent expression of political, religious, or ideological opinion or belief through the Internet, including electronic mail;

“(C) an assessment of the extent to which government authorities in the country have sought, inappropriately and with malicious intent, to collect, request, obtain, or disclose

without due process personally identifiable information of a person in connection with that person's nonviolent expression of political, religious, or ideological opinion or belief, including expression that would be protected by the International Covenant on Civil and Political Rights, adopted at New York December 16, 1966, and entered into force March 23, 1976, as interpreted by the United States; and

“(D) an assessment of the extent to which wire communications and electronic communications are monitored without due process and in contravention to United States policy with respect to the principles of privacy, human rights, democracy, and rule of law.

“(2) CONSULTATION.—In compiling data and making assessments under paragraph (1), United States diplomatic personnel should consult with relevant entities, including human rights organizations, the private sector, the governments of like-minded countries, technology and Internet companies, and other appropriate nongovernmental organizations or entities.

“(3) DEFINITIONS.—In this subsection—

“(A) the term ‘electronic communication’ has the meaning given the term in section 2510 of title 18, United States Code;

“(B) the term ‘Internet’ has the meaning given the term in section 231(e)(3) of the Communications Act of 1934 (47 U.S.C. 231(e)(3));

“(C) the term ‘personally identifiable information’ means data in a form that identifies a particular person; and

“(D) the term ‘wire communication’ has the meaning given the term in section 2510 of title 18, United States Code.”.

#### SEC. 4279. GAO REPORT ON CYBER AND TECHNOLOGY DIPLOMACY.

Not later than 1 year after the date of the enactment of this Act, the Comptroller General of the United States shall submit a report and provide a briefing to the appropriate congressional committees that includes—

(1) an assessment of the extent to which United States diplomatic processes and other efforts with foreign countries, including through multilateral fora, bilateral engagements, and negotiated cyberspace agreements, advance the full range of United States interests in cyberspace, including the policy described in section 4274;

(2) an assessment of the extent to which United States diplomatic processes and other efforts with foreign countries, including through multilateral fora, bilateral engagements, and negotiated agreements, advance the full range of United States interests with respect to critical and emerging technologies;

(3) an assessment of the Department of State's organizational structure and its approach to managing its diplomatic efforts to advance the full range of United States interests in cyberspace and with respect to critical and emerging technologies, including a review of—

(A) the establishment of a bureau in the Department of State to lead the Department's international cyber mission;

(B) the current or proposed diplomatic mission, structure, staffing, funding, and activities of such bureau;

(C) how the establishment of such bureau has impacted or is likely to impact the structure and organization of the Department of State;

(D) what challenges, if any, the Department of State has faced or will face in establishing such bureau;

(E) the current and proposed diplomatic mission, structure, staffing, funding, and activities related to critical and emerging technologies; and

(F) how the Department of State is integrating the critical and emerging technologies mission with the cyber mission; and

(4) any other matters that the Comptroller General determines to be relevant.

#### SEC. 4280. STRATEGY FOR CRITICAL AND EMERGING TECHNOLOGIES.

Not later than 180 days after the date of enactment of this Act, the Secretary of State shall submit to the appropriate congressional committees a strategy for critical and emerging technologies that—

(1) identifies key international and diplomatic issues related to critical and emerging technologies;

(2) identifies the specific components of the Department of State accountable for the issues identified in paragraph (1);

(3) defines the processes by which the Department of State will identify, understand, and allocate responsibilities for novel technologies;

(4) defines the processes for reporting and information sharing within the Department of State;

(5) defines the processes for interagency consultation and collaboration;

(6) identifies how existing processes at the Department of State will be integrated into new efforts by the Department of State on critical and emerging technologies; and

(7) defines a strategy for recruiting training, and retaining additional personnel needed to implement the strategy, including individuals with significant expertise and training in science, technology, engineering, and mathematics.

**SA 2000.** Mr. SCOTT of Florida (for himself and Mr. RUBIO) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the end of title III of division F, add the following:

#### SEC. 6302. CERTIFICATION REQUIRED TO REMOVE ENTITIES FROM ENTITY LIST.

The Secretary of Commerce may not remove any entity from the entity list maintained by the Bureau of Industry and Security and set forth in Supplement No. 4 to part 744 of title 15, Code of Federal Regulations, until the Secretary certifies to Congress that the entity is no longer reasonably believed to be involved in activities contrary to national security or foreign policy interests of the United States.

**SA 2001.** Ms. HASSAN (for herself and Ms. ERNST) submitted an amendment intended to be proposed by her to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the appropriate place, insert the following:

# SEC. \_\_\_\_\_. VIRTUAL CURRENCIES AND THEIR GLOBAL USE.

(a) REPORT.—Not later than 2 years after the date of enactment of this Act, the Secretary of the Treasury, in consultation with the Attorney General, the United States Trade Representative, the Board of Governors of the Federal Reserve System, the Office of the Director of National Intelligence, and any other agencies or departments that the Secretary of the Treasury determines are necessary, shall submit to the Committee on Agriculture, Nutrition, and Forestry, Committee on Finance, the Committee on Banking, Housing, and Urban Affairs, the Committee on Foreign Relations, and the Committee on the Judiciary of the Senate and the Committee on Agriculture, the Committee on Ways and Means, the Committee on Foreign Affairs, the Committee on the Judiciary, and Committee on Financial Services of the House of Representatives a report on virtual currency and their global use, which shall—

(1) assess how foreign countries use and mine virtual currencies, including identifying the largest state and private industry users and miners of virtual currency, policies foreign countries have adopted to encourage virtual currency use and mining, and how foreign countries could be strengthened or undermined by the use and mining of cryptocurrencies within their borders;

(2) identify, to the greatest extent practicable, the types and dollar value of virtual currency mined for each of fiscal years 2016 through 2022 within the United States and globally, as well as within the People's Republic of China and within any other countries the Secretary of the Treasury determines are relevant; and

(3) identify vulnerabilities, including those related to supply disruptions and technology availability of the global microelectronic supply chain, and opportunities with respect to virtual currency mining operations.

(b) CLASSIFIED ANNEX.—The report required under subsection (a) shall be submitted in unclassified form, but may contain a classified annex.

**SA 2002.** Ms. ROSEN (for herself and Mr. WICKER) submitted an amendment intended to be proposed to amendment SA 1502 proposed by Mr. SCHUMER to the bill S. 1260, to establish a new Directorate for Technology and Innovation in the National Science Foundation, to establish a regional technology hub program, to require a strategy and report on economic security, science, research, innovation, manufacturing, and job creation, to establish a critical supply chain resiliency program, and for other purposes; which was ordered to lie on the table; as follows:

At the end of title I of division F, add the following:

## Subtitle D—Teach CS Act

### SEC. 6131. SHORT TITLE.

This subtitle may be cited as the “Teacher Education for Computer Science Act” or the “Teach CS Act”.

### SEC. 6132. TEACHER QUALITY ENHANCEMENT.

Section 204(a)(4)(G)(i) of the Higher Education Act of 1965 (20 U.S.C. 1022c(a)(4)(G)(i)) is amended by inserting “and development of computational thinking skills” after “integrate technology”.

### SEC. 6133. ENHANCING TEACHER EDUCATION.

Section 232(c)(2) of the Higher Education Act of 1965 (20 U.S.C. 1032a(c)(2)) is amended by inserting “and development of computational thinking skills,” after “technology”.

# SEC. 6134. TEACHER EDUCATION PROGRAMS FOR COMPUTER SCIENCE EDUCATION.

Part B of title II of the Higher Education Act of 1965 is amended (20 U.S.C. 1021 et seq.) by adding at the end the following:

## “Subpart 6—Teacher Education Programs for Computer Science Education

### “SEC. 259. TEACHER EDUCATION PROGRAMS FOR COMPUTER SCIENCE EDUCATION.

“(a) PROGRAM AUTHORIZED.—From the amounts appropriated to carry out this section, the Secretary may award competitive grants to eligible institutions to establish centers of excellence in teacher education programs to support computer science education and computational thinking skill development.

“(b) USE OF FUNDS.—A grant awarded to an eligible institution under this section—

“(1) shall be used by such institution to ensure that current and future teachers meet the applicable State certification and licensure requirements in a field that will enable them to teach computer science in their State at the elementary and secondary school levels, by—

“(A) creating teacher education programs that meet the requirements of section 200(6)(A)(iv) and offer, through hands-on and classroom teaching activities with in-service teachers—

“(i) doctoral, master’s, or bachelor’s degrees in teaching computer science at the elementary school and secondary school levels; or

“(ii) teaching endorsements in computer science, in the case of a teacher with related State certification and licensure requirements or a student who is pursuing certification and licensure requirements in related fields, such as mathematics and science;

“(B) ensuring that current and future teachers who graduate from such programs meet the applicable State certification and licensure requirements, including any requirements for certification obtained through alternative routes to certification, or, with regard to special education teachers, the qualifications described in section 612(a)(14)(C) of the Individuals with Disabilities Education Act;

“(C) recruiting individuals to enroll in such programs, including subject matter experts and professionals in fields related to computer science; and

“(D) awarding scholarships and fellowships of not more than \$4,000 per student based on financial need and to recruit traditionally underrepresented groups in computer science to help such students pay the cost of attendance (as defined in section 472); and

“(2) may be used by such institution to conduct research in computer science education and computational thinking skills to improve instruction in such areas.

“(c) DURATION.—

“(1) IN GENERAL.—A grant under this section shall be awarded for 5 years, conditional upon a satisfactory report to the Secretary of progress with respect to the program carried out with the grant after the first 3 years of the grant period.

“(2) REPORT OF PROGRESS.—Such report of progress on the program shall include data on the number of students and instructors enrolled, information on former graduates (including on how many earn teaching certification or licensure in a field that will enable them to teach computer science in their State at the secondary level, be prepared to teach computer science at the elementary level, and support students in developing computational thinking skills), and data on any additional funding (other than Federal funds) received to carry out the program.

“(d) APPLICATION.—

“(1) IN GENERAL.—An eligible institution desiring a grant under this section shall sub-

mit an application to the Secretary, at such time in such manner, and containing such information as the Secretary may require, which shall include—

“(A) a demonstration of the need for teachers with the certification or licensure requirements that enable them to teach computer science at the elementary and secondary level in the geographic area or State in which the institution is located;

“(B) the plan to ensure the longevity of the program after the end of the grant; and

“(C) the plan to scale up the program (including the plan for the number of personnel to be hired, a description of their expected qualifications and titles, the number of fellowships and scholarships to be awarded, the estimated administrative expenses, proposed academic advising strategy, and organizing and outreach to maintain virtual community of computer science educators).

“(2) EQUITABLE DISTRIBUTION.—The Secretary shall award grants under this section in a manner that ensures an equitable distribution of grants—

“(A) to rural and urban eligible institutions;

“(B) to eligible institutions that qualify for a waiver under subsection (e)(2); and

“(C) to eligible institutions that are located in areas where there is a need for increasing computer science education opportunities.

“(e) MATCHING REQUIREMENT.—

“(1) IN GENERAL.—To receive a grant under this section, an eligible entity shall provide, from non-Federal sources, an amount that is not less than 50 percent of the amount of the grant, which may be provided in cash or in-kind, to carry out the activities supported by the grant.

“(2) WAIVER.—The Secretary shall waive all or part of the matching requirement described in paragraph (1) for any fiscal year the Secretary determines that applying such requirement to the eligible institution would result in serious hardship or an inability to carry out the authorized activities described in this section.

“(f) REPORT TO CONGRESS.—Not later than 2 years after the first grant is awarded under this section and each year thereafter, the Secretary shall submit to Congress a report on the success of the program based on metrics determined by the Secretary, including the number of centers established, the number of enrolled students, and the number of qualified teachers.

“(g) TECHNICAL ASSISTANCE.—The Secretary shall use up to 5 percent of the amount appropriated for each fiscal year to provide technical assistance to eligible institutions.

“(h) DEFINITIONS.—In this section:

“(1) ELIGIBLE INSTITUTION.—The term ‘eligible institution’ means an institution of higher education, as defined in section 101, which may be in a partnership with a non-profit organization.

“(2) COMPUTER SCIENCE.—The term ‘computer science’ means the study of computers, including algorithmic processes and the study of computing principles and theories, as defined by a State, and may include instruction or learning on—

“(A) computer programming or coding as a tool to—

“(i) create software, such as applications, games, and websites; and

“(ii) process, manage, analyze, or manipulate data;

“(B) development and management of computer hardware related to sharing, processing, representing, securing, and using digital information; and

“(C) computational thinking skills and interdisciplinary problem-solving to equip